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SCHOOL OF SCIENCE, SCHOOL OF SCIENCE, HURRAY, HURRAY, HURRAY

VOL. XXXIX — Thursday, January 15, 1948 — No. 9

Proving Ground Topic For Next General Meeting

The General Motors Proving Grounds will be the topic of the next meeting of the Engineering Society to be held Tuesday, January 20 at 4 p.m.

The speaker for the meeting is Mr W. J. Davidson, Administrative Engineer, General Motors Technical Centre. Mr. Davidson graduated in Mechanical Engineering from McGill University in 1913, and joined the staff of the Cadillac Motor Car Co., moving to General Motors Corporation in 1914. Since that time he has had diversified activity in many phases of the General Motors engineering organization.

He has had the positions of Chief Engineer, Canadian Products Division; Technical Director, General Motors of Canada Limited; In 1923 he was appointed to the staff of the General Technical Committee and also of the New Devices Committee of General Motors. Since then he has been successively: Business Director of the Research Labs, Technical Director; General Sales Manager of the Diesel Engine Division.

During the First World War Mr. Davidson served with the Motor Transport Corps of the U.S.A. He was discharged with the rank of Captain. The French Government awarded him the Cross of the Legion of Honour.

In addition to these activities he is a member of the S.A.E. and has been active on many technical committees. He was President of this body in 1939, and represented the S.A.E. on several American Standards Association Sectional Committees.

Mr. Davidson will deal mainly with the General Motors Proving Ground which is the focal point of General Motors testing. He will discuss the objects of the tests, the manner in which they are done, how the instrumentation is used, and other related matters. In addition, he stated in an interview, he may touch upon a few modern improvements in automobiles such as compression engines and automatic transmissions. Mr. Davidson said, "Being quite familiar with the Toronto Engineering Society group, I shall do my best to touch on various phases of engineering of interest to them."

Mr. Davidson is one of the best qualified men in Canada to speak on this subject, and an interesting meeting is assured.

Featured Pianist

Oscar Peterson, Canada's King of the Keyboard

CHEMICAL'S NEW PROF. IMPORT FROM STATES

Dr. G. W. Minard recently appointed Associate Professor of Chemical Engineering is one of Canada's imports from the United States. Although only in his thirties, Dr. Minard has had a varied background of experience, both in practical as well as academic fields.

Born in Chicago, he received his elementary and grammar school education in that city and graduated with the degree of Bachelor of Science from the Armour Institute of Technology, now the Illinois Institute of Technology. After graduation he was employed by the Chicago Extruded Metals as assistant plant chemist.

Dr. Minard entered the Ohio State University three years later where he obtained his master's degree and Ph.D. During that time he worked part time as a graduate assistant, a position corresponding to that of demonstrator.

During the Second World War he worked as a junior engineer for Chemical Warfare Service in which capacity he carried out a Plant Acceptance test for a firm manufacturing activated charcoal for respirators.

After the war Professor Minard accepted a post as assistant professor in Chemical Engineering at the University of Utah, and was the only chemical engineer on the staff. During that time he assisted in the designing of a Chemical Engineering Laboratory and lectured Elementary and Industrial Chemistry.

Late in 1945 he accepted a position with the Utah Oil Refining Co. which was manufacturing aviation gasoline. With this company he was in charge of the hydrogen generating plant, and the naptha isomerizing unit.

When asked what were his impressions of Canada Dr. Minard stated: It feels very much like the same country. The Toronto people are very friendly—more so than in some cities of the same size in the United States When you ask people for directions they are very civil, even if they cannot answer your question"

PETERSON ON PIANO VIVID DECORATIONS AT SCHOOL-AT-HOME

The first School function of the New Year is the biggest of the term —the Annual School-At-Home which takes place tonight. Dress for the event is to be formal and semi-formal, and first indications seem to be that it will be about fifty-fifty each way.

The dance is to commence at nine-thirty o'clock, with a star-spangled cast of musicians. The man who rated the accolade "best black-box man I've heard in some time" from Count Basie (who should know), Canada's King of the Key Board, Oscar Peterson, shares top billing with Johnny Holmes and his orchestra. It is hoped that the great pianist will give a concert during the evening.

Frank Bogart and his band will supply the music for dancing in one ball-room, alternating with Chico-y Los Rumberos. This latter band will supply Latin American rhythm for anyone wanting to shake loose kinks in a rumba or samba. Lyrics will be supplied by Babs and the Bobolinks.

Three ballrooms are provided for the event, two for dancing, and one for rest and refreshments. This ballroom will be dimly lit, and will, we quote, "set a mood of romantic fever". The music to suit the "fever" is to be supplied by the [illegible] Serenaders Trio.

Included in this lounge will be a bar for the convenience of those attending. Bartenders will be on hand to do a professional job on the drinks, and so there is no need for further ballast. The bar will close up at 1.30.

In addition to these attractions, there will be numerous exciting surprises and frantic frolics. The madmen will be running wild, and there will be several novelty dances.

Buses have been provided to transport the men of Ajax to and from Toronto. The following is the schedule upon which they will operate:

Leaving York Hall for Toronto—5:15, 6:15, 7:15.

The buses will pick up their passengers on Bloor St., between Bay and Yonge Streets between 2:30 and 3:15. They will leave as they are loaded, with the last bus pulling out at 3:15.

Railroads Want Civil Engineers

The West African Civil Service is looking for young graduates in Civil Engineering to work in West Africa in various types of employment. The supply of engineers to serve in the colonies has been inadequate since the end of the war.

These facts were contained in a letter sent to Professor Glazebrook by R. H. Renison.

The qualifications for employment in this type of work are small. The candidate must be a qualified graduate engineer with about two years practical experience. Single men, or married men with no children are preferred.

The salaries are based on a report made to the government earlier this year, and are scaled from 510 pounds to 1,000 pounds per annum in increments of 30 pounds per year. These salaries compare favorably with those offered in Canada. In addition to this, government homes are supplied for from 60 to 90 pounds per year.

Mr. Renison stated that most of the work would be connected with the Public Works Department, but that there are some openings in the Railway Department. He also stated that although West Africa has the greatest shortages, there are openings in Malay and various other colonies.

E.I.C. Presents Students' Night

On Wednesday, January 28, the Engineering Institute of Canada is presenting its Annual Students' Night. The purpose of this meeting is for the students of Engineering to present fifteen minute talks on any subject. One hundred dollars is awarded in prizes to the three top contestants.

Due to the large number of contestants usually entering, preliminary hearings are heard on the Friday and Monday preceding the event. The six best speakers from those heard, then present their talks at the open meeting. From these six, the top three are picked.

The contest is open to all students in third and fourth years, whether student members of the E.I.C. or not, and all students are free to attend. Entries may be submitted to Prof. T. R. Loudon, Prof. C. F. Morrison, or Prof. Lauchland. These entries must be in before noon, January 19.

Engineering Physics . . . Its Flexibility Gives Many Openings

By J. R. LESLIE, 3T8 — RESEARCH ENGINEER—H.E.P.C.

Nine years have elapsed since the first Engineering Physics class graduated. It is pertinent at this time to review the experiences of the earlier graduates. I shall try to give you, in a few words, some of our thoughts on Engineering Physics and its application in industry.

Our experience in industry has shown that the fundamental training received in the Engineering Physics course is applicable to most branches of Engineering. This, perhaps, is the most important conclusion that can be drawn as a result of our nine years in industry. The application of wartime advances in aeronautics, electronics, infra-red, geophysics, to name a few, all require a general scientific knowledge.

Fundamentals Important

The variety of problems which arise in industry and particularly in development work seems to be endless and the graduate will be expected to supply a correspondingly endless fund of knowledge. As proof of the value of the Engineering Physics type of training, it need only be noted that engineering educators have proposed, in a revision of existing courses, an increase in the teaching of the fundamental sciences, which are now taught in our course alone. Because of this training, the Engineering Physics graduate need not be wary of accepting a position outside his own field.

During the first few years in industry the graduate will probably hold a junior engineer grade and after about three years he should be promoted to assistant grade. Further promotion is dependent on his ability, his initiative and his personality. Industry is not reluctant in recognizing the energetic worker.

It should be pointed out that in strictly research positions, the graduate does not in general assume the responsibilities that other work provides, especially as far as supervising others is concerned. For those who ultimately desire administrative work, the openings in industry will be more attractive than those in government laboratories. Many of the earlier graduates now hold responsible positions in large concerns.

Post Graduate Training

The question of post graduate training is a debatable one. Many of us believe that experience in industry is equally important as an M.A. or Ph.D. Although a graduate degree is a definite advantage, it is not a cure-all or a guarantee of success. The undergraduate is advised to get some practical experience first, before considering further studies. He should also be warned that there may be a surplus of engineers in the not-too-distant future, at which time there will be very little choice for those looking for employment.

Salaries Paid

Before the war, research salaries generally were lower than those paid in other branches of engineering. This unfortunate state of affairs has now been or is being remedied. The undergraduate is referred to the result of salary questionnaires published by the Engineering Institute of Canada and by the Association of Professional Engineers of Ontario—See "The Professional Engineer" for October, November, 1947. This issue shows salaries paid in the profession, grouped according to the various branches of engineering. The Association also publishes a salary schedule (December, 1947 issue) which is recommended as a fair basis of payment for engineering services. The average monthly salary after 1 year of service is shown to be $250.00 per month, rising to $325.00 after five years of service. These figures may be high for most concerns at the present time.

You may ask which lectures we believe to be the most valuable. Those in general physics and mathematics are undoubtedly the most necessary, but only if they are tempered with an engineering slant without which the worker becomes an "arts" man.

Positions Available

The majority of the undergraduates can expect to be employed in the electrical or aeronautical industries. Openings are also present in the National Research Council. Twenty-one of the first graduates, after approximately 8 or 9 years away from school, are employed as follows:

	Per No.	Cent
Electrical (Utilities and Industry)	8	38
Aircraft Industry	7	33
Government (including armed services)	4	19
University	2	10

Of these, twenty-one graduates, at least ten, or 50%, are doing development or research work.

J. R. Leslie,
3T8.

TOIKE OIKE

Devoted to the interests of the Undergraduates of the Faculty of Applied Science

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Communism's Aid

The meeting of the CSVA held during the Christmas holidays agreed that the present high cost of living endangered the ability of the student veteran to continue with his education.

During the past four years, the cost of one year at S.P.S. has risen from approximately seven hundred dollars to over one thousand dollars. This fifty percent increase should present a responsibility to the government of this country, a responsibility to examine the problem and to restore the balance to a point where the average student's income is able to meet the costs. The present situation means that many potential scientists, doctors, lawyers and statesmen, of which Canada is in great need, will be lost. The brain-power of a country is its most valuable resource, and should be developed as such towards the increase of the national wealth.

Another damaging consequence of these obstructions to a genuine education will be the growth of a spirit of futility and dissatisfaction. If the current struggle against the Communist doctrine is to be won, the great breeder of Communism—discontent—must be removed. Amongst the many who will be denied a university education there are potential leaders. Having been denied their ambitions, their inherent qualities towards leadership, their brains, and their intelligence may be directed against the system which brought about the frustration of their hopes. This discontented group is easy prey to agitators and societies which recruit them to serve their own purposes. To prevent this utilization of their capacities towards the destruction, rather than towards the building of the society, it is necessary to remove the cause.

Not only is it common sense to facilitate the education of all who are capable, but it is an absolute necessity for a homogeneous state. Legislation cannot remove the communists, nor is it a wise plan to seek control by suppression. Lenin has stated, "Give me four years in which to teach the youth, and the seed I have sown will never be uprooted." It is up to the universities to utilize these years in the teaching of fundamentals upon which sound decisions may be based. For the malleability of youth, twisted by a just discontent, can as it has in some countries either seriously cripple, or actually destroy the system.

Thus to prevent this discontent amongst an intelligent section of the population, amongst those that the country can ill afford to lose, let alone have against her, it is imperative that a solution to the problem of the high cost of education should be found. This could be accomplished co-operatively between the municipalities, the universities, and the government. It is not enough for a democracy to guarantee the freedoms, for if a man is incapable of enjoying them, he is not free.

Outside Contributors

In this issue we have three articles by contributors outside the faculty. Two of these are in answer to letters we sent last November to several heads of industries employing engineers.

We are gratified by their interest in the school and in the paper, and by the time and thought evident in their articles.

We are indebted to R. D. Hiscocks, of DeHaviland Aircraft, and to J. R. Leslie, Research Engineer, of the Hydro Electric Power Commission.

The third article, dealing with NFCUS, is by Miss Ann Warren Ryan, of McGill University. Miss Ryan, at the time of writing, was deep in mid-term examinations. For the time she gave to this article, we are therefore doubly indebted to her.

Opportunities for The Aeronautical Engineer

THE Canadian Aircraft Industry is of modest proportions in normal times and employment opportunities are accordingly limited in comparison with many other branches of engineering. In the light of present uncertainties it is impossible to foresee developments in a field which has always been characterized by the improbable. The most that we can do is to examine trends which are apparent from current activities.

To many young graduates design is the pinnacle of achievement. The modern aeroplane is not conceived by an individual burning genius. On the contrary the design is sweated out by a closely coordinated team of specialists representing a wide variety of talents and experience. Each specialist is responsible for the work of a group of design engineers comprising, at the minimum, power plant, equipment, structures, and aerodynamics. Each of these groups in turn will subdivide to an extent dependent on the size of the firm, the degree of Government support it enjoys and managerial aplomb. Finally there is a large supporting cast of loftsmen, tool designers, production supervisors and draughtsmen which will include graduate engineers.

* * *

THREE Canadian firms at the present time maintain on a long term basis design offices staffed by qualified engineers. The average age in these offices is quite low, consequently there are few retirements and on the present basis the demand for replacements probably does not exceed a total of six to twelve per year.

The survival of even three design firms is by no means assured, for private enterprise can no longer afford to originate new designs without some form of Government backing. The era of the 'private venture', which has been responsible for many superlative aircraft, is probably with the past. On the other hand, in the interests of international harmony it is not likely that the number of design firms will be permitted to reduce below two.

The young engineer who intends to achieve, with reasonable dispatch, a position of responsibility in a design office requires as initial equipment a sound grounding in engineering fundamentals, some knowledge of shop practice and the ability to work in concert with others.

Aircraft repair organizations occassionally retain qualified engineers in order to design and certify as airworthy minor structural and aerodynamic modifications to approved aircraft types. Openings for permanent positions of this kind are rare but on a temporary basis afford the young graduate an excellent opportunity to discover first hand the unpredictable things that happen to aeroplanes in the field.

* * *

THE National Research Council should have a strong appeal to the graduate with an above average aptitude for physics and mathematics and tempermental inclinations toward research. There are opportunities to study and develop ideas in highly specialized branches of the Art. Close contacts with fellow investigators and all published literature together with access to excellent experimental equipment provides a constant stimulus to the research minded individual. For those who do not intend to make a career of research in the Government service it is Council policy to assist in the training of specialists for Canadian Industry. An advanced aeronautical degree is not essential as yet for admission to the Council but a high academic standing upon graduation is necessary.

Alternatively the gifted student with research or pedagogical tendencies may elect to continue with University studies and obtain an advanced degree. Opportunities for research in most of the Universities are not ideal at the present time but will undoubtedly improve. The opinion that a fully qualified lecturer must have graduate industrial experience is widely held in Industry but it must be admitted that many competent lecturers are totally devoid of any such background.

* * *

THE high technical standard maintained by Trans-Canada Airlines is the result of careful planning and this Company employs a staff of qualified engineers. The numerous activities which comprise modern Airline operations and a variety of equipment afford the young engineer opportunities to acquire useful experience in many branches of aeronautical engineering. There are from time to time openings with T.C.A. which merit the close consideration of graduates with a reasonably high standing.

Canada has for many years led the world in the number of commercial ton-miles flown. It is noteworthy that a large portion of this activity is in the bush with seaplanes and skiplanes, in the use of which Canada also leads the world. There is also an increasing amount of photo survey work. The fact that the typical Canadian operator has not in the past made great use of the services of aeronautical engineers should present a challenge to the young graduate.

The Department of Transport is a Government agency responsible for insuring that aircraft and operators alike meet certain minimum standards of safety. As Canada has no comprehensive Airworthiness requirements of her own the policy is to accept, with minor amendments, United States and United Kingdom requirements, and the interpretation and application of these is one of the D.O.T. functions. A somewhat detailed Government check of all design assumptions, calculations and test procedure is usual. Hence during a fertile period of design activity in Industry a fair sized staff of quality engineers is required by this Licensing authority. The Department also maintains a number of Inspectors in the field.

The Junior engineer would normally start in such a position checking computations or with minor inspection duties and later assume greater responsibilities commensurate with his expanding knowledge. Some previous experience in Industry is highly desirable.

* * *

THE Air Transport Board is a Department of the Dominion Government which serves the Minister of Transport in an advisory capacity. It constitutes a small staff of engineers who analyze current operating costs, predict probable passenger load factors and many

(Continued On Page 4)

LETTERS to the EDITOR

Toronto, Ontario,
Jan. 12, 1948.

The Editor: TOIKE OIKE.

I would like to bring to the attention of your readers the present controversy regarding the National Federation of Canadian Students (N.F.C.U.S.) on this campus.

A N.F.C.U.S. Committee was set up on this campus in the fall of 1946 as a committee of the S.A.C. as it remains to the present. This committee has been functioning since that time as the local branch of the national organization. The purpose of N.F.C.U.S. has been to promote the welfare of Canadian Students and to encourage integration of all Canadian Students by inter-varsity cultural exchange, i.e., debates, drama and music festivals, athletics, student exchange etc. The welfare activities so far have consisted surveys of student services on the various campi and suggestion of improvements on campi where services were below par.

Controversy first arose regarding the chairman of the committee, Mr. Gord McLean. In the fall of 1946 it was rumoured about "Skule" that he was a Communist and a group of "Schoolmen" attended the next meeting and had a new chairman appointed. After this meeting the new chairman, a Schoolman who had apparently no interest in the organization, resigned and since then Skule's major contribution has been to add to the general apathy on the campus.

The next controversial issue was that of affiliation with the International Union of Students (I.U.S.). This brought the question of whether N.F.C.U.S. should "dabble" in international affairs or pursue a strictly national isolationist policy. The chief point of controversy was not so much that of international affiliation as one of the integrity of the particular organization under consideration. The charge was that the Headquarters of I.U.S. are in Prague and Communist domination was feared.

We had a very conclusive report of the meeting of the Council of I.U.S. held last summer by Mr. Robert Rambusch (last year's St. Mikes' representative on the S.A.C.). He mentioned the Communist nature of the organization due to the fact that the U.S.S.R. and other eastern European countries were among its members. He strongly recommended N.F.C.U.S. should affiliate and add to the democratic voice already heard from Australia, New Zealand, India, Great Britain, South Africa, and the Scandanavian countries. He believed that these countries with the aid of the U.S. National Student Association would be able to keep the organization democratic.

The decision regarding affiliation was to be taken to Winnipeg to the national conference of N.F.C.U.S. (S.P.S. representative on the local committee) was instructed by the Eng. Soc. Executive to vote against affiliation however the motion for affiliation was passed. I introduced a further motion that affiliation of N.F.C.U.S. with I.U.S. be subject to a referendum of all student members of N.F.C.U.S. which was passed by the committee. The S.A.C. which is the final authority passed the motion for affiliation but rejected the referendum.

The motion that Mr. McLean (present chairman of the local committee and representative from O.C.E.) should not be sent to the national conference because of his political opinions was brought up at the S.A.C. meeting by the S.P.S. members but the motion was defeated approximately 9-3. I have heard other charges as to Mr. McLean's ability as a representative but have not sufficient evidence to know whether they are true or untrue so I will not repeat them. Mr.

(Continued on Page 4)

Sportoike

By FRANK SQUIRES

The co-eds play hockey at Varsity arena,
Whoever gave sanction should be served a subpoena.
They fight and bump for all they're worth,
I hope they survive their first childbirth!

Do you have eight o'clock lectures?

6.45* Sleep is interrupted by the vicious invention called the alarm clock! What a gawdawful clattering, screaming noise pierces the morning silence as cog number 63, and gear 42 combine to trip lever 18 which lets fly the hammer at the bell. This nerve-shattering, wild sound is enough to discourage all but the strong of both mind and body of ever gaining further education.

6.47* A long arm reaches from under the covers to quiet the insane mechanism screaming from the bedside table. The cold morning air causes the arm to be immediately pulled back into the warmth of flannel sheets and heavy blankets and the decision is made, though never carried out, to only open window half as high to-night.

6.49* A second awakening. You're late! It must be after eight! A quick look at ticking maniac relieves thoughts of tardiness and again eyes close. However hedlight is shone directly into eyes and radio beside bed is turned on with great volume to avoid further dozes into dreamland.

6:50* Mind has become awake sufficiently to realize that temperature is even lower than first suspected. An engineering problem is faced. How to close window and turn on radiator without the agony of leaving warmth of bed. Since slide-rule is not within reach no solution of problem is forthcoming. Great admiration felt for radio announcer who carelessly announces that the temperature is 12 degrees and that you'd better leave early this morning because the streets are heavy and slippery after last night's heavy snowfall.

7:00* Stu Kenney laughingly screams, "Wake up Ontario." Ha, but you're away ahead of Mr. Kenney! You've been out of bed for thirty seconds—already the window is shut, the radiator is turned on, you're half dressed and heading for bathroom. A terrible reflection is that image you see in the mirror. Eyes look as sad as burnt holes in proverbial blanket—hair resembles confusion of connections made the day previous in the electrical lab—face looks very sad!

7:10* Thanks to Lifebuoy, Gillette, Colgate, and Brylcream, (who will all be receiving bills for advertising) you look and feel like you've been awake for 10 minutes and 30 seconds. Things begin to look cheery. Why it won't be long until the day is over. Only four lectures this morning—design lab this afternoon—heat engines to-night! And DVA cheques will be coming thru in only two more short weeks!

7.20* Two cups of coffee—toast—marmalade—and away to face the tribulations of another day. As you leave the cozy warmth of indoors you gaily sing the engineer's song:

Oh it's great to be in a course like SPS,
Where solutions never come just by pure guess.
Every subject that we study we agree is really great,
But why the hell do they have to start the day at eight!

* If you commute from Ajax, use Atlantic time.

Win and Tie At Athletic Night

On Monday night, Buff Horton, Director of Athletics at Ajax, once more presented a "terrific" show to the students. This was the first Athletic Night of the New Year, and it set a high standard for the others to follow. The Ree. Hall was packed for the event.

The University of Western Ontario Intermediate Hockey and Basketball teams were guests of Ajax for the evening, and were not treated in too generous a fashion.

Bruce Cummings, playing defence for the Ajax team seemed to enjoy battling against his gridiron opponents of last fall, and he turned in a bangup effort as Ajax tied U.W.O. 1-1. Although the game was very fast (after the ice began to freeze) there was only one penalty handed out, and that for playing with a broken stick. Boh Hooking was another good performer for the Jaxmen. This Apax team looked like great material to wind up with the laurels in the intramural hockey race.

On the basketball court, the Farmers ploughed the U.W.O by a 54-44 count. This was another fast breaking game, with the close checking of both teams keeping the score down. It was in this aspect that Ajax showed their superiority over the Metrasmen. Here again is a team which will be a real threat to the "city men".

At this point, Boh Underwood took over the show to demonstrate the womanly art of self defence. To most people it would be called Jiu Jitsu, but to Bob it is 'Defendo". To this observer, it was four women to run from. The things the weaker sex can do, and this being leap-year and all. Tunney would give his eye teeth to match them in a team bout against The Whip, The Masked Marvel, Killer Katan, and the Mummy.

During the course of the show, the Dean Young pennant was presented to residence W-6. Four leafs and ex-leafs were present.

Another interesting feature of the show was the presence of a number of hockey lights both of the N.H.L. and of the inter-collegiate league. These were Tim Daly, Ed. Krysanowski, Ace Bailey, Jim O'Neill, from Western, and Johnny McCreedy. Much of the discussion centred around the Canadian Olympic team. Ace Bailey went right out on the limb and declared that in his opinion, the team to beat was the U.S. or Czechoslavakia. He stated that the Blues would have been a much better team to send than the one which was sent. Tim Daly, when asked his opinion on the team Canada sent replied, "Did they send a team?"

Buff Horton didn't say what he had in mind for the next athletic night, but if he lives up to the reputation he has set with the last few, it will be good.

Residence W-6 Repeats Win

Carrying on their outstanding performance of November, Residence West 6 with Athletic Representative Frank Juryn, created a new record for int-r-rsidence competition at Ajax by winning the Dean Young Pennant for the second month in a row. While other residences have been declared winners twice during a season, this is the first time that any house has accomplished the feat of being declared winners in two consecutive months.

Runners up to the champs were Residences 725, 731 and W-5 with Residence 724 coming on fast in the closing days of the month. Athletic representatives George Latinovich, Bill Penhorwood and Boh Oxland promise a different finish in the month of January so look out for your laurels this month.

Following is the complete standing of the residences for the month of December:

Dean Young Pennant
Residence Standing for Month of December

1. Residence W6, 22 points.
2. Residence (725, 731, W-5,) tie, 20 points.
5. Residence 724, 18 points.
6. Residence (722, 728, 734, 737) tie, 16 points.
10. Residence 733, 14 points.
11. Residence (723, 730, 738, W-2) tie, 12 points.
16. Residence (729, 732, 740) tie, 10 points.
19. Residence (726, 727, 736) tie, 8 points.
21. Residence (W-1, W-21) tie, 6 points.
23. Residence 744, 4 points.
24. Residence (743, 721) tie, 2 points.

Ajax Basketball Teams Present Strong Roster

Under the eagle-eyed coaching of Patrick O'Sheehamberg of the York Belting Seniors, Ajax A and B Basketball teams are fast rounding into shape for the coming Interfaculty competitions. Having lost several of last season's interfaulty champions, the Ajax coach has had to fill in several important spots and after a good deal of experimenting has finally divided the boys into two clubs which he expects will hold their own in the McCutcheon loop.

Hold-overs from last season include "Casey" Latinovich, George Pogontcheff, Harry Wilson, Eric Taylor and Don Gregory who will again perform for the A team. Stepping up from the B club will be Don Scott who performed in outstanding fashion for the group finalists last season; Bud Willsie, a sharp-shooting forward; Bill Autterson, a Windsor grad, along with Bob Canning and Lie Lawson, two Ajax lads who did not perform last season.

Once rounded into shape these 10 boys will undoubtedly uphold the basketball adition at Ajax as always having the fighting ball club.

In their opening game of the season against Niagara University Freshmen the Ajax boys looked anything but Interfaculty champions but the experience gained has stood in good stead and their practice sessions have been enlivened by the cool reminder of "You know what happened at Niagara!"

The Ajax B team will present plenty of brawn as well as speed and deception for coach Sheehan has several lads who will be hard to keep from stepping up to the A team.

Sharp-shooters such as Buchanan, Blackwoods, Ham and Stepkowsky will cause plenty of worry to opposing defensemen and with considerable help from McCagherty, Keen, Penhorwood, Braithwaite and Neilson incoming basket hunters are certain of a warm reception. All in all, Ajax does not feel at all badly about their basketball chances during the 1948 season and the present holders of the Sifton Cup they would like nothing better than to once again place this valued trophy alongside of the soccer and volleyball cups already captured this season.

'Twas the Night After Xmas

'Twas the night after Christmas, and boy, what a house!
I felt like the devil, and so did the spouse.
The egg-nogg and turkey and candy were swell,
But ten hours later they sure gave me He——.
The stockings weren't hung by the chimney with care,
The darned things were sprawled on the back of a chair.
The children were nestled all snug in their bed,
But I had a large cake of ice on my head.

And when at last I dozed off in a nap;
The ice woke me up when it fell in my lap.
Then for some unknown reason I wanted a drink,
So I started feeling my way to the sink.
I got along fine till I stepped on the cat;
I don't recall just what occurred after that.
When I came to, the house was flooded with light,
And I wondered with panic if I'd live through the night.

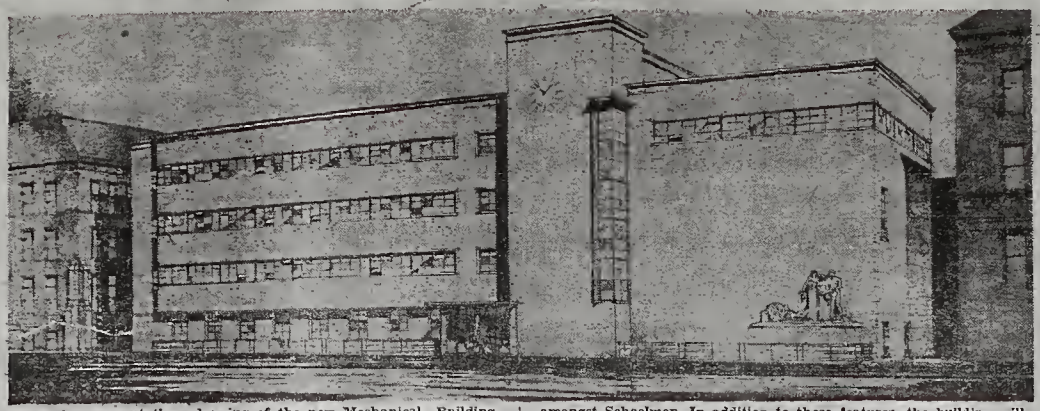
While visions of sugar plums danced in my head,
I somehow got up and then back into bed.
Then what to my wandering mind should appear
But a miniature sleigh and eight tiny reindeer.
Then the sleigh seemed to change to a red fire truck,
And each reindeer turned into a fiery eyed buck;
I knew in a moment it must be Old Nick.
I tried to cry out but my tongue was too thick.
Then the old devil whistled and shouted with glee
While each buck pawed the earth and looked daggers at me.
Then he called them by name and the names made me shudder;
When I heard them I felt like a ship minus rudder:

"Now Egg-nog! Baeardi! Four Roses! and Brandy!
"Now Fruit Cake! Cold Turkey!
Gin Rickey! and Candy!"
At the top of his voice, to the top of my skull
Now whack away, crack away, with thumps that are dull.
Then in a twinkling I felt on my roof
The prancing and pawing of each eloven hoof.
How long this went on I'm sure I can't say,
Tho' it seemed an eternity is a long day.
But finally the night after Christmas had passed,
And I found that I really could think straight at last.
So I thought of the New Year a few days away,
And I made me a vow that no tempter can sway.

I'm sticking to water, don't even want ice,
For there's nothing as tasty, or nothing as nice.
The night after New Year's may bother some guys,
But I'e learned my lesson, and brother, I'm wise.
You can have your rich victuals and liquor that's red,
But what goes to my stomach won't go to my head.
So a big Happy New Year to you — and to all,
I'm back on the wagon and hope I don't fall.

But coming along soon is the School-At-Home
And away from my vows, I'm afraid I might roam;
To the bar in the lounge, with the lights turned down low,
To the fiery fluids, I'll hurry and go.
And when seeing me there, this is what you must do,
Take me firmly in hand and say,
"It's not for you,"
"Gingerale, Coca-Cola, Root Beer and Lime Rickey,
These are O.K. for you, but nary a quicky."

Mechanical Building For The Class of 4T9?



Above is a presentation drawing of the new Mechanical Building, from the offices of the Architects, Allward and Gouinlock. The windowless section to the right contains an auditorium seating 350 people, and equipped for sound motion picture projection. The Student's Common Room, on the third floor, will fill a long standing need amongst Schoolmen. In addition to these features, the building will contain many new labs and lecture rooms to keep pace with the rapidly changing mechanical picture of the world. This contemporary approach to a design solution is a commendable change from the traditional University buildings, and is appropriate to the Faculty of Applied Science and Engineering.

New Labs And Student's Common Room Included In New Mechanical Building

* * *

J. E. Dalrymple

Just to the south of the School Building, and facing on the University Drive, an L shaped addition to the Mechanical Building is attracting the interest of many engineering students. This building, which it is hoped will be completed in time for the opening of the next term, will be one of the most impressive on the campus, and will become the virtual home of schoolmen in all courses. This new Mechanical Building will not only relieve the congestion of students, but will provide needed facilities for research in mechanical subjects.

In the basement, a new Hydraulics Laboratory with a 200 foot channel will permit model testing on a fairly large scale, while a new glass sided tank, much wider than the present one, will allow research to be carried on simultaneously with student experiments. Also in the basement facilities will be available for the X-raying of welds and castings.

The ground floor will provide a new and modern Library, another section of this floor will be occupied by a machine shop to be used both for maintainance and research work. The Mechanical Laboratory will be located on the second floor, and here power transmission, lubrication, vibration, and speed control problems will be studied. On the second floor also will be a new fuel testing laboratory for both solid and liquid fuels.

An addition which schoolmen will warmly welcome is a Students' Common Room which will provide a convenient spot to stop between lectures and during spares. This will be on the third floor, which will also contain a staff common room, and a Heating, Ventilating, and Air Conditioning Laboratory. The top floor will be devoted to an Industrial Laboratory for motion and time study, and plant layout. On this floor too will be the beginning of what Professor Allcut hopes will eventually be a fairly comprehensive Engineering Museum.

The southernmost part of the new wing consists of three windowless stories which will house a large auditorium seating 350 people, and two large lecture rooms. These will have artificial lighting and air conditioning facilities, and will also be equipped for motion picture projecton. Above these rooms will lie the Machine Design Laboratory which will utilize the maximum natural light possible by means of windows along three walls.

One of the chief advantages of the new wing is that it will permit a complete rearrangement of the old section of the building. The present Heat Engines Laboratory is already being slowly transformed, and when completed will have a separate section for internal combustion engines. A very ambitious Heat Transfer Laboratory will extend from T-8 on the top floor to the basement. The present Library is to be converted into a constant temperature room.

Much of the equipment necessary for this expansion has already been purchased and is only awaiting a place to be set up. The University has also been fortunate in securing a 50 kilowatt Parsons Turbine. Six of these famous engines are being distributed to universities throughout the world, by the manufacturer, and the one for Canada has been allotted to Toronto. The new building will be a suitable home for it.

Aeronautical Engineering

(Continued From Page 2)

associated matters in order to indicate, for example, the desirability of operating a feeder airline between two small centres of population. The object in this case would be to discourage cutthroat competition and uneconomical operations which would not be in the public interest. The operator cannot receive a Charter for air services which are not approved by the Board.

Having mentioned some of the openings which may reasonably be expected to exist the question naturally arises as to the prospects for advancement. This is a difficult matter to discuss in general terms and is one with which the student should deal specifically when considering a particular position. In the writer's experience increased responsibilities and advancement are almost invariably achieved by the young engineer who steadfastly increases his usefulness to his employer, maintains a balanced perspective, and keeps abreast of developments in the Profession. On the other hand who can hold out bright prospects for the man who never looks beyond the immediate results of the daily work and who substitutes for preparedness and planned thinking an everlasting vaque disquiet at the limitations of current chores?

* * *

IT is difficult to remain indifferent to salaries under present conditions but the young engineer is well advised at the outset to place the emphasis on experience and the right type of employment. The time to bargain is later when his worth has been demonstrated. At the preseat in Government circles starting salaries for junior engineers range from 175 to 200 dollars per month, in Industry from 190 to 220 dollars per month, roughly. After a period of five years the Civil servant may be making 250 dollars per month and his Industrial contemporary 300 per month.

The status which society accords the aeronautical engineer depends very largely upon the individual himself. From the general confusion and conflict which dominates society the engineer with his ability to deal with facts and realities dispassionately has emerged with a high prestige. He can maintain and enhance such prestige only by recognizing the responsibilities which accompany such a reputation and by applying his talents to the improvement of human welfare.

R. D. HISCOCKS

Oscar Peterson Canadian Artist

Oscar Peterson, born in Montreal, is one of the best Canadian musicians today. He commenced the study of the piano at the age of four under his father's guidance. When he was eleven years old he studied under Paul DeMarky, well known concert pianist. At the age of eighteen, he joined the Johnny Holmes band in Montreal, and the development of his distinctive style is due to this orchestra leader.

His music is recorded by the Victor Company, and the records have made him a familiar artist to all Canadians. In addition to this canned music, he has appeared on several radio programs as guest artist. Amongst these are: "The Canadian Cavalcade", "The Happy Gang", "Sunday Night Show", in addition to which he has his own program, "Oscar Peterson at the Piano".

When not playing the piano, his favourite hobby is model trains. He everything from a station to a whistle stop.

During his visit to Toronto for the School-At-Home, it is hoped that Peterson will play a concert for the boys at Ajax.

They Have That

Although using only eleven men per game, two sets of defensemen, two forward lines and a goalie, Marlboros have compiled a fine record in 12 games played—17 wins, five losses and one tie.

—Toronto Globe and Mail, Mon., January 12, 1948.

NFCUS – ITS ORGANIZATION AIMS AND ACHIEVEMENTS

By ANN WARREN RYAN

Editor's Note: In view of the ignorance (our own included) existing at the present time as to the function and purposes of NFCUS, we asked Miss Ann Warren Ryan, of McGill University, to write the following article for us. We hope that the apathy at present existing towards NFCUS may soon be cleared away, as it is at present entering the international field, and we should all know more about its make-up and aims before we sanction such a move.

The National Federation of Canadian University Students, besides being the only organization nationally representative of Canadian university students, has during its twenty years of more or less continuous existence achieved a number of important benefits for students. These have included the railway reductions for student travel during vacation, reductions in sports equipment and in play royalties for student groups, etc. During the past year, N.F.C.U.S. has, besides achieving the re-establishment of these benefits which were lost during the war, gone into a number of new fields. Besides setting up exchange scholarships for Canadian students between our own universities and those in the States and in Holland, (this last through the I.S.S.), it is now working on the acquisition of some one hundred $1,000 scholarships and has also done intensive research into the numbers and distribution of available scholarships which should be valuable in encouraging increased government help in this field.

National Intercollegiate Activities

As a result of its initiative, plans are now underway to set up the first national intercollegiate athletics union to be established in Canada. Arrangements are also underway to extend debating and drama competitions to a national level. Arrangements have been made with the National Film Board to have a film made in 1948 on life on campi across the country, and it is hoped that within the next few months we will have a weekly half-hour coast-to-coast pick-up on the CBC.

Because of its representative nature, N.F.C.U.S. is the one student body which is qualified to represent Canadian students to international groups—a qualification which has been proven important during the last couple of years. I refer here to the ability of N.F.C.U.S. last year to classify the position of certain students who were considered to represent Canadian students to the International Union of Students but who were, in reality, representing only such groups as the S.C.M. and the N.C.S.V.

Responsibility Is Individual Council's

The full responsibility for the program of national N.F.C.U.S. lies with the individual students' councils at each of the eighteen universities that are its members. These are represented by their respective presidents at the annual conference which is to the policy-making body of the organization. The decisions reached at this conference are either carried out by the national and regional officers (consisting of a president, four regional vice-presidents, and a permanent secretary-treasurer) or else referred back to local committees for study and recommendations of action, in which case final decision of the matter will, if of a controversial nature, wait until the following national conference.

Can Undertake Many Services

It can readily be seen by the nature and activities of the N.F.C.U.S., that it is in a position to undertake many services for students which no individual university, working alone, would be able to achieve. The work done during the past year has really only been indicative of the innumerable potentialities of the organization, and it is to be hoped that with the services of a full-time president (At the approaching conference, it is going to be suggested that the president give up his year of university and devote himself full-time to the work of N.F.C.U.S. as that is, in effect, what this year's president has had to do.) that many of these will be realized within the next few years.

Credit Goes To Past President

It should be added that most of the credit for the success of N.F.C.U.S. during the past year falls to its president, Maurice Sauve, a student in Law at the University of Montreal. His enthusiasm and tremendous energy have not only been responsible for much of the success of the national executive in carrying out the decisions of the conference held in Toronto last Christmas, but also had much to do with the fact that N.F.C.U.S. is an organization of high prestige in every university in the country. This is essential as the national work is really an outgrowth of the research and recommeadations of the local committees.

LETTERS to the EDITOR

(Continued from Page 2)

McLean has spent more time on the work of this committee and is no doubt more familiar with the work of N.F.C.U.S. than anyone else on this campus.

We shall see what has been done at Winnipeg and I shall have a report on this for the next issue. Meetings of the local committee are all open and advertised in the Varsity. Any student may speak on any issue under discussion. It is your democratic duty to attend these meetings and to express your views if possible.

Throughout I define Communism as the system of government of the U.S.S.R. and democracy as the principle of government of the people, by the people and for the people. Please excuse the frequent use of initials but I think I have defined any that may be unfamiliar.

Yours sincerely,
Harold P. Kochler,
160 Huron Street.
MI 7627.